Methods: In year 2014, there were three potential outbreaks caused by 10 strains of Vancomycin Resistant *Enterococci*, 11 strains of Methicillin-resistant *Staphylococcus aureus*, and 6 strains of *Klebsiella pneumonia* in our hospital. The RAPD was performed by using 6-carboxyfluorescein (FAM)-labelled and non-labelled primer mixture. After PCR amplification, the products were analysed by 3500 Genetic Analyzer (Applied Biosystems) and Qsep100 DNA Analyzer (BiOptic Inc.).
Results: The RAPD patterns were almost identical between strains isolated from the same patients. The FAM labelled PCR products can be easily detected and clearly differentiated by 3500 Genetic Analyzer for size less than 500 bps. The total PCR products with FAM labelled and non-labelled DNA can be easily detected and clearly differentiated by Qsep100 DNA Analyzer for size up to 5,000 bps stained with EtBr.
Conclusions: The RAPD typing method still have highly reproducible results so long as well quality and concentration of template DNA, concentrations of PCR components, and the PCR cycling conditions. In this study, we successfully typed HAI strains by using RAPD method analysed by fluorescent or EtBr-labelled capillary electrophoresis system.

PS 1-085

INVESTIGATION AND MANAGEMENT OF A CLUSTERING OF THE HEMODIALYSIS UINT IN A TERTIARY TEACHING HOSPITAL

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Purpose: A cluster of influenza like illness took place in the hemodialysis unit of a tertiary teaching hospital was self-reported at 19th August 2013 which prompted this investigation and this cluster was soon halted after intervention. Here presents the details of this investigation and investigation.
Methods: An investigation was started for the endemic situation of flu like illness among the staffs of the hemodialysis unit and the renal patients August 1st 2013. The adherence to the employee health management and infection control policy was especially accessed.
Results: During the period from August 8th 2013 to August 16th 2013 a total of 8 staffs (one doctor and 7 hemodialysis technologists) and 3 renal patients experienced fever and flu like symptoms including cough, myalgia, and diarrhea. The symptomatic staffs searched medical help by themselves. Influenza A infection was diagnosed in 2 staff based on the result of influenza rapid test. However, they neither informed the colleague and the supervisor nor followed the employee health management to report to the health information system timely. In the hemodialysis room the space and timing for dinner are limited which also possibly facilitate the spreading of the flu like illness. Interventions based on the employee health management and the infection control policies were filed after discussion between the infection control unit and the staffs of the hemodialysis unit. No new case of flu like illness among the staff and renal patients visiting the hemodialysis unit was noticed till August 24th 2013 and this investigation was then closed. During the following year (from September 1st 2013 to August 31th 2014) a total of 4 staffs of the hemodialysis unit suffered fever and flu like symptoms at different month during this period.
Conclusions: This investigation underscores the importance of strict adherence to employee health management to prevent the spreading of highly contagious disease in the working space.

PS 1-086

THE EXPERIENCE IN DEALING WITH A CLUSTER OF INFLUENZAE A OCCURRED IN DIALYSIS CENTER IN A REGIONAL HOSPITAL

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Purpose: On August 5, 2013, a patient who infected influenzae A occurred in Dialysis Center (DC) in our hospital, Tainan Municipal Hospital. We therefore took immediate actions of investigation and found 7 persons (4 patients and 3 registered nurses) had the symptoms of influenzae. After the investigation, we adopted the necessary measures of epidemic prevention and hoped this experience could be provided to the hospitals as reference of disease prevention and cure.
Methods: Once notification received in Infection Control Room(ICR), actions taken immediately were (1)to trace conditions of both patients and epidemic, (2)to adopt droplet precaution, (3)to emphasize on hand washing, (4)to place the infected patients in the isolation room and proceed hemodialysis, (5)to open the windows in the ward of DC, (6)to ask the infected nurses to take a seven days' leave, (7)to reinforce environmental cleaning and disinfection, (8)to dose those who contacted with infected persons with Tamiflu prophylactic medicine, (9)to collect specimens of the 4 patients and send them to Centers for Disease Control(CDC) for inspection.
Results: Through the investigation, we found the infected persons didn't fully implement hand washing and masks wearing. The major symptom of the 7 persons was fever(85.7%) as well as the minor one was cough(71.4%). 6 persons were confirmed influenzae A(85.7%) by the influenzae rapid screening. All the results of the 4 specimens inspected by CDC were influenzae virus type swH1. No new cases occurred on August 12.
Conclusions: Vaccine is recognized worldwide as the most effective way to prevent influenzae. This cluster was rapidly controlled within one week. The causes we analyzed are non-implementation of cough etiquette and hand hygiene. In the future, we shall raise vaccination rates and implement measures of infection control to prevent spread of the epidemic.

PS 1-087

INVESTIGATION AND MANAGEMENT OF SEVERAL CASES OF *K. PNEUMONIAE* CARBAPENEMASE PRODUCING ENTERIC BACTERIAL COLONIZATION OR INFECTION

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Introduction: This case study and management was initiated by documented occurrence of *Klebsiella pneumoniae Carbapenemase* (KPC) producing enteric bacteria in a medical center in Northern Taiwan. The KPC enteric bacteria were detected during an epidemiology study by Center for Disease Control(CDC), Taiwan, for Multi-Drug Resistant microorganisms in year 2012.
Methodology: CDC, Taiwan, reported 26 cases with KPC bacteria of this medical center from January to October 2012. For the cluster of 8 in September and October, seven of them were in the wards of Chest Medicine. The infection control team took actions, including educational training for better KPC awareness, intensified antibiotics stewardship program for units of Chest Medicine, increased housekeeping cleansing frequency, re-enforcement of contact protection, and KPC screening for contacts and the environment.
Results & discussion: After the intervention, the conforming rates for contact isolation and environmental cleansing have been optimized to 100%. The yielding rate of carbapenemase-resistant K. pneumoniae (CRKP) in sputum was 0% in an investigation in early November. Hand hygiene practice reduced the CRKP positive rate to 9.6% (3/31) in December among medical professionals, with none of them positive for KPC. CRKP positive rate in the environment vicinity of KPC cases had been 4.1%(2/48), with none of them positive for KPC. CRKP was on the drawer handle and the bed railing. The positive rate was reduced to 0%(0/8) after intervention. CRKP positive rate was 3.6%(2/55) in Chest Medicine Ward, also with no KPC. Positive spots were the microwave control panel and the lid of ice machine lid.
Conclusion: Hand hygiene and environmental cleansing are very important. KPC cased should be tagged and isolated for awareness, with medical equipment for use exclusive to them. Rotating personnel have to be well educated. Reported KPC cases have been reduced to one per month up to May, 2014.